

SOFTWARE RELEASE BULLETIN

CIP V9 L704B

for

CYBER 960

Control Data Corporation recommends that this Software Release Bulletin be read in its entirety prior to any CIP V9 L704B installation.

SMD800423C

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Introduction to CIP V9 L704B

The CYBER Initialization Package (CIP) consists of hardware/software interface modules. The modules are released on tape and must be installed to disk for system operation. The CIP V9 L704B release supports CYBER 960 only. The CIP V9 L704B module levels are listed in the table below:

NOTE: Please consult your Field Change Announcement (FCA) sheet to verify that the hardware is at the appropriate level prior to the installation of CIP V9 L704B.

Release Levels

<u>Module</u>	<u>Level</u>	<u>Module</u>	<u>Level</u>	<u>Module</u>	<u>Level</u>
CTI	704B	DSKA	03	TAPA	02
MSL	704B	DSKB	03	TAPB	03
EDD/RCM	704	DSKC	03	TAPC	02
DFT/DBD/ECR	87/04/04	DSKD	03	TAPD	02
EI	21	DSKE	03	TAPE	03
MDD	13	DSKF	03		
SCI	96	DSKG	02		
SCD	05	DSKH	03		
VCB	02	DSKI	04		
VPB	01	DSKJ	02		
SSR	02	DSKK	02		

Structure of CIP V9 L704B Tape

- File 1 CIP V9 L704B deadstart file.
- File 2 CTITEXT.
- File 3 Empty file.
- File 4 NOS peripheral microcode.
- File 5 NOS/BE peripheral microcode.
- File 6 Procedure to install peripheral microcode onto the NOS/BE operating system.
- File 7 Seldom-used and unsupported diagnostics that can be loaded at the option of the site maintenance personnel. Instructions for copying file 7 to a tape for installation are contained in appendix B.

CIP V9 L704B Support

Any problem with CIP V9 L704B should be reported on a PSR, specifying the nature of the problem. Please include the CIP V9 L704B version and level number on each PSR, for example CIP V9 L704B where 9 is the version, and 704B is the level.

Microcode problems should be reported on TARs. To communicate verbally, contact Customer Service Support: 1-800-345-9903 for the United States and Canada and 612-851-4131 for international customers.

Any problem experienced with the media and/or CIP V9 L704B package contents should be brought to the attention of Software Manufacturing and Distribution (SMD). If you determine that you have such a problem, there is a form, "THE SOFTWARE MANUFACTURING AND DISTRIBUTION CRITIQUE LETTER", that accompanies each CIP tape sent to the field. To reorder replacement CIP tapes, fill out the form with the type of problem you encountered, your return mailing address and the type of tape you require, for example CIP V9 L704B. Return the form and defective tape to SMD so a replacement tape can be sent.

Replacement tapes can also be ordered by phone, 612-482-3747. No matter how the replacement CIP V9 L704B tape is ordered, SMD has requested the return of all defective CIP V9 L704B tapes accompanied with the form. Only problems related to media should be reported by this method.

Diagnostic Features

IOU Diagnostics

The IOU diagnostics - CCA4, IPI4, ISI4, MRT4, and TPA4 were modified to support the CYBER 960.

CYBER 960 Diagnostics

The diagnostics were developed for the CYBER 960 as follows:

ACT3P ANT3P BPT3P CMT3P CST3P CST3P CTT3P ICT3P IFT3P MAT3P
LMT3P MCT3P MDT3P OIT3P PDT3P SMT3P

DFT

Support for the CC598B and CYBER 960 was added.

EDD

Support for the CC598B and CYBER 960 was added.

CTI/CMSE

Support for the CC598B and CYBER 960 was added.

Installation

CIP V9 L704B Installation

- A. The CYBER Initialization Package (CIP) User's Handbook, revision K (60457180) supplied with the CIP kit, must be available for shared usage.
- B. Do not install CIP V9 L704B on a disk when another system is using the disk. Initialization of disks using CIP V9 L704B should be accomplished when CIP V9 L704B has sole access to the disk, to avoid conflicts with operating system access and also to avoid possible file corruption.

In dual state, the CIP V9 L704B device must be defined to the host operating system (NOS). It must either be defined in the NOS/VE configuration as OFF or must be omitted from the NOS/VE configuration; the former is preferable. A device which is OFF is not used by NOS/VE unless it is a CIP V9 L704B device, and then only for DFT access.

In NOS/VE standalone, the CIP V9 L704B device must be ON if it is a NOS/VE device.

If you want to alternate between dual state and standalone, the same PHYSICAL_CONFIGURATION and configuration prolog can be used for both, but only if the device containing CIP V9 L704B is defined in the NOS/VE physical configuration as OFF when running dual state.

- C. CIP V9 L704B supports the following operating system release levels.

NOS 2.6.1 L710

NOS/VE 1.3.1 L710

- D. The following steps are used to install CIP V9 L704B to the deadstart device:

1. Deadstart from the CIP V9 L704B tape and install it to disk using the update or initial install option as documented in the CYBER Initialization Package (CIP) User's Handbook, revision K (60457180).

If CIP V9 L704B was previously installed, the update option may be used to reinstall CIP V9 L704B and permanent files do not require dumping and reloading. If the update option is used for installation to a disk that does not contain CIP, the error message UNABLE TO PERFORM -UPDATE- INSTALL. COMMON DISK AREA NOT INITIALIZED is issued by CTI and the site should perform an initial CIP install and permanent files must be dumped prior to CIP installation and re-installed after CIP is installed.

2. If your site does not use NOS/VE, you can proceed to step 7. If your site uses NOS/VE, deadstart from the CIP V9 L704B disk.
3. Select the U (Utilities) option.
4. Select the V (Install NOS/VE Boot Programs) option.

5. Mount the CIP tape with a level that matches the level of NOS/VE that is desired.
6. Enter the configuration information and install the NOS/VE boot programs.
7. The CIP V9 L704B installation process is complete.

Peripheral Microcode Installation

New levels of peripheral microcode for NOS are distributed via CIP V9 L704B. The NOS/VE operating system obtains peripheral microcode from the CIP V9 L704B common disk area, which is installed with CIP V9 L704B and does not require the deadstart tape be modified.

Acquiring the peripheral microcode from the CIP V9 L704B tape for installation onto the operating system is an operation separate from CIP V9 L704B installation. NOS peripheral microcode is contained on file 4 of the CIP V9 L704B tape. Sites using NOS 2.6.1 L710 do not require any peripheral microcode installation.

NOS Sites

NOS sites must update the operating system deadstart tape if it is not at NOS 2.6.1 L710. The following procedure installs peripheral microcode onto an operating system tape and directs its installation.

1. Deadstart NOS.
2. Mount the CIP V9 L704B tape.
3. Enter the following commands at the system console under DIS or from an interactive terminal:

```
REQUEST,CIP,VSN=CIP,D=PE,F=SI,LB=KU,PO=RF,NT.
```

```
SKIPF,CIP,3.
```

```
COPYBF,CIP,LGO.
```

```
RETURN,CIP.
```

```
COMMON,SYSTEM.
```

```
SYSGEN,DST,SYSTEM,LGO,NEW,USERD,density.  where density is the density  
                                              of the new deadstart tape  
                                              (such as PE, GE)
```

These steps create a new deadstart tape containing the new peripheral microcode. The new tape is requested with a VSN of NDT. It should be assigned with the VSN,est,NDT command from the system console, where est is the EST ordinal of the tape drive where the operating system tape is written.

4. If CIP V9 L704B has not been installed to disk yet, use the process documented in the CIP V9 L704B Installation section mentioned previously.
5. Perform a level 0 (zero) NOS deadstart with the new tape.

General Notes / Cautions

- A. It is recommended that only one CIP V9 L704B operating system deadstart device per mainframe be used, due to the retention of mainframe configuration information between deadstarts by CTI on the deadstart disk. It is not recommended to have two mainframes share a common CIP V9 L704B device.
- B. The NOS/VE deadstart process in standalone mode is very sensitive to the contents of central memory. If the contents of memory are not as NOS/VE left them from a previous standalone deadstart (or not as CTI initialize mainframe left them), the NOS/VE deadstart hangs in the PP boot and no message is displayed to indicate the hang. Use the initialize mainframe option on the Utilities display after changing memory, page size, or maintenance activities, to avoid such hangs.
- C. After performing any physical (hardware) mainframe reconfiguration, the Mainframe Reconfiguration Table (MRT) must be cleared prior to an operating system load. After the MRT is cleared, any logical (CTI) reconfiguration information must be re-entered. The steps required to clear the MRT are as follows:
 - 1. Deadstart from the CIP V9 L704B disk.
 - 2. At the CIP V9 L704B Initial Options display, enter a U (Utilities).
 - 3. At the Utilities display, enter an H (clear the Mainframe Reconfiguration Table). The following messages are displayed:

CLEARING THE MRT WILL CAUSE THE
FOLLOWING ITEMS ON THE NEXT
DEADSTART,

ALL MAINFRAME MEMORIES WILL
BE INITIALIZED FOR OS LOADS.

CM RELOAD FROM EDD TAPE OPTION
WILL NOT BE AVAILABLE.

(CR) TO CONTINUE

- 4. Enter a (CR).

The MRT is now cleared and all previous reconfiguration entries are deleted. These include all the items specified in the CYBER Initialization Package (CIP) User's Handbook, revision K (60457180).

- D. When displaying memory while using MDD with a hexadecimal address that begins with the hex digits AD, the user must enter the parameter name. For example, to display the contents of byte AD(16), enter the command DB AD=AD.
- E. MDD mode of SCI is designed to allow an analyst to observe the condition of a mainframe before NOS/VE begins its initialization routines. For SCI to begin the deadstart of NOS/VE, the user should press the F7 key on a CC634B terminal. If a terminal other than a CC634B is used, the operator should enter an RS (RECORD SEPARATOR = 1E hexadecimal) and a lower case w. This is true regardless of the origin port of the deadstart or the port that MDD is to drive.
- F. When using a CMTS (698) tape drive, an alternate deadstart does not work on the first attempt (PSR CTIA568). The alternate deadstart does work on the second attempt.
- G. PSR CTIA591. When a CTRL G and then an S is entered for a short deadstart, the screen may have several lines which are rapidly writing over themselves. This problem has been seen several times while testing. You can usually clear this by entering CTRL G and then S again.

MSL Notes / Cautions

- A. Users should read the MSL15X Reference Manual (60456530) before attempting to use MSL products on the CIP V9 L704B release.
- B. Microfiche program listings of CTI, microcode, SCI, SCD, MDD, DFT, and EI are available at the discretion of the District Technical Operational Support (TOS) managers or the Country Central Office.
- C. CMSE reserves certain channels (including the channels numbered identical to those of the monitor PP), the display driver PP, and the PP communications channel. These are defined by initial CMSE display items 6 and 7. These channels and PPs may be redefined before proceeding with the loading of CMSE to allow diagnostics to run on peripheral equipment connected to them.
- D. Some MSL15X diagnostics use channels to communicate between PPs. If one of these diagnostics is loaded into PP 10, CMSE hangs.
- E. Caution must be exercised if command buffers that call CONFIG are changed. CONFIG modifies command buffers by fixed line numbers.
- F. Deleting DEMOT's OUTPUT files (*DP,fn command), or any other file created without a 77 table (such as the flaw map from FMU), results in the error message PRFX TABLE MISMATCH appearing in the keyboard area error/message line. Although the file was deleted and the error message can be cleared with no need to retry the command, the disk space used by such a file is not released by CMSE. If a SRT FULL situation is encountered, CIP V9 L704B requires reinstallation using the update installation option.

- G. The memory tests generally do not execute properly if CMSE is using central memory for communication.
- H. If CIP V9 L704B is installed on a shared device, diagnostics are being executed with the error stop parameter turned off, and the log error to CMSE dayfile parameter is turned on and the diagnostic fails, it is possible that CMSE could overflow the reserved dayfile area on the disk. If this error occurs, the Program Name Table (PNT) is partially or completely destroyed. The PNT is used by CMSE when loading programs from disk.

The frequency of this happening depends on how many programs were installed on the CIP V9 L704B device from MSL, the size of the programs (this varies by mainframe type), the number of errors encountered and written to the dayfile, and how often the dayfile is cleared.

The indication that this has happened varies depending on how much of the PNT was destroyed. The two most likely indications that this error has occurred are:

- o CMSE issues a message indicating that a program can't be found on the disk.
- o CTI issues a message indicating that a program can't be found on the disk when attempting to deadstart.

It is recommended that the CMSE dayfile be cleared periodically to avoid the possibility of this problem occurring.

- I. A problem currently exists where NOS/VE may destroy CIP V9 L704B when CIP V9 L704B is installed to an 844 disk and is subsequently used as the CIP device by NOS/VE. This problem will be corrected when a determination of the problem has been made.
- J. To run the I4 (CIO) PP based diagnostics, central memory has to be enabled at the initial CMSE display by entering 8.3 (parameter change). If you are not familiar with the running of CIO PP based diagnostics on an I4 IOU (CIO), the diagnostics do not run without CM enabled. Refer to Service Bulletin 6945. Examples of some diagnostics affected are:

- o CCA4 - 170 DMA (CIO) channels
- o ISI4 - Intelligent Subsystem Interface (ISI) channels
- o IPI4 - Intelligent Peripheral Interface (IPI) channels
- o HYDR - DMA enhanced ISI channel adapter to 887 disk test
- o UESM - ESM/STORNET monitor
- o UHYD - ISI channel off-line monitor of 887 disk in-line test
- o DEMOT diagnostics (CIO)

Note: The 170 DMA IOU diagnostic CCA4 leaves the CIO IOU in a state that the DEMOT diagnostics can't use. A deadstart followed by a U-I-M sequence corrects the problem.

K. With an 895 disk as the CIP device, the diagnostic FCT5 may fail with the error message SEC 8 SS 1 CON 4 F50E. The problem is documented by PSR CIP138. To work around the problem, perform the following steps after CIP installation:

1. Deadstart from the CIP disk.
2. Enter M to initiate MSL.
3. At the CMSE parameter options display, enter TDX(CR).
4. Enter -CR- to continue.
5. Enter the CIP disk channel and unit.
6. Enter the tape type, channel, equipment, and unit that the CIP tape is mounted on.
7. Enter C to add programs to disk.
8. Enter Y to select duplicate name check.
9. Enter Y to replace duplicate names.
10. Enter F50E for the COPY FROM message.
11. Enter F50E for the COPY THRU message.
12. When the binary program has been placed on the MSL disk, the display returns to the TDX Options display.
13. The program F50E has been correctly replaced on the MSL library.

L. Errors have been seen in the following test subsections:

1. PDT3P - S02, SB05 (intermittent; effected by margins)
2. ICT3P - S06, SB00 (intermittent)
3. PDT3P - S05, SB02 (fails after CTI initialization)
4. SMT3P - S07, SB07 (fails after CTI initialization)
5. IFT3P - S05, SB01 and S06, SB01 (intermittent)
6. CMT3P - S10, SB02 (fails with frequency margins)

Corrections for these problems is scheduled for the CIP V10 L716 release.

Appendix A

Mainframe/Peripheral Microcode and FCA Index Levels

Mainframe Microcode

<u>Mainframe System Type</u>	<u>Microcode Version</u>
CYBER 960-11	05
CYBER 960-31/32	05

Peripheral Microcode

These are the versions of peripheral microcode furnished on the CIP V9 L704B tape and the current versions with which CIP V9 L704B was tested.

<u>Name</u>	<u>Version</u>	<u>Description</u>
MA401	08	844FT peripheral microcode
MA454	04	FSC Disk peripheral microcode
MA462	05	ISD Adapter peripheral microcode
MA464	09	895 Disk peripheral microcode
MA466	03	5870 NIP peripheral microcode
MA710	13	844HT peripheral microcode
MA721	12	885/FMD peripheral microcode
MA722	03	885/FMD DEMA Disk peripheral microcode
MB401	03	FSC Tape peripheral microcode
MB434	14	66X peripheral microcode
MB466	02	MSE peripheral microcode
MB467	01	698 CMTS Tape peripheral microcode
MH426	08	CM-3 peripheral microcode

Field Change Announcement (FCA) Index Levels

FCA plug and play index levels are documented on the FCA sheet distributed with CIP V9 L704B.

Appendix B

File 7 Installation Instructions

Contents

File 7 on all CIP V9 L704B tapes with MSL contains the following programs:

FFU01-FFU99A
FLM00-FLM99C
FSM00-FSM99A
F4401-F4499A
F7X00-F7X99A
F8801-F8899A
PDP01-PDP99B
BCX-9X6
MY8-9VJ
MY9-9VT
LDC-9V5
MTC-9UP
S2C-8JU
SCX
CID-7AZ
MYP-9VX
PAGE2
STAT2
TASE2
TIVE2
GENM
CACHE-CACHEB
TRPEM-TRPEB
VAUTO-VAUTOB

Installation Instructions

To copy file 7 to another tape for installation by TDX, refer to the NOS instructions listing below.

NOS Instructions

JOB.
USER,user,pw,family.
CHARGE,charge,project.
REQUEST,CIP,VSN=CIP,NT,PE,F=SI,LB=KU,PO=R.
REQUEST,COPY,VSN=COPY,NT,PE,F=SI,LB=KU,PO=W.
SKIPF,CIP,6.
COPYBF,CIP,COPY.

NOS/BE Instructions

JOB/account
REQUEST,CIP,VSN=CIP,NT,PE,NORING.
REQUEST,COPY,VSN=COPY,NT,PE,RING.
SKIPF,CIP,6,17.
COPYBF,CIP,COPY.

Refer to the MSL15X Reference Manual for a description of TDX.

Appendix C

CC598B Console Software

Introduction

The CC598B console software was installed on the hard disk at the factory prior to shipment. Applying power to the console automatically executes this software.

Re-Installation

Should it become necessary to re-install the I4 Console Software, refer to the CDC 19003 System Console Hardware Operation/Maintenance Guide, publication number 60463610.

Problem Reporting

Problems and requests for software enhancements could be submitted through the SOLVER database using the Product Identifier CSW.

Console Software Notes/Cautions

When entering CC598A/CC598B console or remote passwords under either the console "MODIFY REMOTE ACCESS PASSWORD" or the "MODIFY CONSOLE PASSWORD" displays, be careful not to enter non-alphanumeric characters. The console accepts them, however remote access will be denied if the password contains a non-alphanumeric character.

F C A I N D E X	EQUIP D A F F E C	SERIES CODE		FCO INFORMATION								PLUG AND PLAY LEVELS				L I N E N O
		FROM	TO	DESCRIPTION & SYMPTOM	PAK TYPE	FCO NO	CO- REQ FCO NO	PRE-REQ FCO NO	SYS INST HRS	ARIES MESS- AGE	CIP	CML	NOS 2.X	NOS BE	NOS VE	
1	AD121A	N/A	01	CENT PROC/CMC/CSU			***	BASELINE		****	V9 L704B	L710	V2.6.1 L710	N/A	V1.3.1 L710 **	1
1	AU133A	N/A	01	96X-11 PERF OPT			"	"	"	"	"	"	"	"	"	2
1	AU134A	N/A	01	96X-31 PERF OPT			"	"	"	"	"	"	"	"	"	3
1	BS226A	N/A	01	1ST MEM INC 64MB			"	"	"	"	"	"	"	"	"	4
1	BS227A	N/A	01	MEM INC OPT 64MB			"	"	"	"	"	"	"	"	"	5
1	AU135B	N/A	01	MEM OPT INST 64MB			"	"	"	"	"	"	"	"	"	6
1	AU135C	N/A	01	MEM OPT INST 128MB			"	"	"	"	"	"	"	"	"	7
1	AU135D	N/A	01	MEM OPT INST 192MB			"	"	"	"	"	"	"	"	"	8
1	AU135E	N/A	01	MEM OPT INST 256MB			"	"	"	"	"	"	"	"	"	9
1	AT478B	N/A	01	I4A			"	"	"	"	"	"	"	"	"	10
1	AT509A	N/A	01	960/I4A INTERFACE			"	"	"	"	"	"	"	"	"	11
1	AT481B	N/A	01	DMA EXP (I4A/C)			"	"	"	"	"	"	"	"	"	12
1	AT482B	N/A	01	DMA EXP 5PP			"	"	"	"	"	"	"	"	"	13
1	AT490B	N/A	01	ISI/DMA CH			"	"	"	"	"	"	"	"	"	14
1	AT498B	N/A	01	170/DMA CH			"	"	"	"	"	"	"	"	"	15
1	AT497B	N/A	01	IPI/DMA CH			"	"	"	"	"	"	"	"	"	16
1	CC598B	N/A	01	SYS./OPER. CONSOLE			"	"	"	"	"	"	"	"	"	17
1	AT522A	N/A		CONSOLE/AT478B INTF			***	BASELINE		****	V9 L704B	L710	V2.6.1 L710	N/A	V1.3.1 L710**	18
ORIGINATOR(PROG.MGR.)				MGR. PA AHPD		MGR. PA CDD		MGR. PA CDED		GEN. MGR. AHPD		GEN. MGR. CDD		VICE PRESIDENT CDED		
J.E.BERGSTROM				M.A.REKER				J.D.KROESCH		W.B.WILLIAMSON				T.J.RILEY		

(*) - Denotes Change
 (**) - BCU L710AA is required.
 N/A - Not Applicable
 (") - Same as previous entry

For a complete system view, reference
 appropriate Field Change Announcements
 (FCA-s): Mainframe - Peripheral - System

For a complete system view, reference appropriate Field Change Announcements (FCA's): Mainframe - Peripheral - System

For a complete system view, reference appropriate Field Change Announcements (FCA's): Mainframe - Peripheral - System.

19-CONFIGURATION MANAGEMENT-88

DATE: 11/05/87

(*) - Denotes Change
N/A - Not Applicable
(") - Same as previous entry

For a complete system view, reference appropriate Field Change Announcements (FCA's): Mainframe - Peripheral - System.

F C A I N D E X	EQUIP AFFEC	SERIES CODE		FCO INFORMATION							REFERENCE THE APPROPRIATE SFCA TO DETERMINE SYSTEM PLUG AND PLAY LEVELS	L I N E I D
		FROM	TO	DESCRIPTION & SYMPTOM	PAK TYPE	FCO NO	CO- REQ FCO NO	PRE-REQ FCO NO	SYS INST HRS	ARIES MESS- AGE		
3	FR205A	13	14	CAPACITOR POLARITY	N/A	ECO ONLY	N/A	N/A	0	F79435		39
3	FR205A	14	15	REDUCE POWER REQUIREMENT	"	"	"	"	"	F79436		40
3	FR205A	15	16	698/FR205/FV720	"	"	"	"	"	F79437		41
3	FV720A	12	13	698/FR205/FV720	"	"	"	"	"	"		42
4	BF706A	04	05	VENDOR MICROCODE CHANGE - VERSION M862V1.TCD	"	CA 48070	"	"	0.5	F80619		43
4	BF706B	04	05	VENDOR MICROCODE CHANGE - VERSION M862V1.TCD	"	CA 48070	"	"	0.5	"		44
5	FR205A	17	18	CYBER UDI CHANGE	"	ECO ONLY	"	"	0	F81020		45
5	FV720A	13	14	CYBER UDI CHANGE	"	"	"	"	"	"		46
6	FR205A	18	19	FIPS UDI CHANGE	"	"	"	"	"	F81021		47
6	FV720A	14	15	FIPS UDI CHANGE	"	"	"	"	"	"		48
6	FR205B	---	01	CYBER CH CPLR	***** BASELINE *****							49
6	FV720B	---	01	CYBER CH CPLR OPTION	***** BASELINE *****							50
6	FR205B	01	02	MAINT. MOD. CHANGE	N/A	ECO ONLY CA	N/A	N/A	0	F81640		51
7	MB466D	01	02	CYBER CH CPLR CONTROLWARE	"	48275	"	"	2.0	F82149		52 *
7	BF706A	05	06	VENDOR MICROCODE CHANGE VERSION M862VX.PF2	"	"	"	"	"	"		53 *
7	BF706B	05	06	VENDOR MICROCODE CHANGE VERSION M862VX.PF2	"	"	"	"	"	"		54 *
ORIGINATOR (PROG.MGR.) MGR. PA AHPD MGR. PA CDD MGR. PA. CDED GEN. MGR. APP GEN. MGR. DEV/ENGRG VICE PRESIDENT CDED K.E. Swanson R.E. Chun N/A J.E. Bergstrom R.A. Moe D.L. Slais												

(*) - Denotes Change
N/A - Not Applicable
(") - Same as previous entry

For a complete system view, reference
appropriate Field Change Announcements
(FCA's): Mainframe - Peripheral - System.

(*) - Denotes Change
N/A - Not Applicable
(") - Same as previous entry

For a complete system view, reference appropriate Field Change Announcements (FCA's): Mainframe - Peripheral - System.